

Gates Formed-Fibre Products, Inc.)	Departmental
Androscoggin County)	Findings of Fact and Order
Auburn, Maine)	Air Emission License
A-678-71-E-A)	Amendment #3

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Gates Formed-Fibre Products, Inc. (GFFP) of Auburn, Maine was issued Air Emission License A-678-71-A-N on August 20, 2001, permitting the operation of emission sources associated with their non-woven fiber products facility. The license was subsequently amended on November 26, 2001 (A-678-71-B-M) and again on January 3, 2002 (A-678-71-C-A).
2. GFFP has requested a minor modification to their license in order to correct Fiberbed Scrubber emission rates and include an operational limit on the amount of thermobonder output per year.

B. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Thermobonders and Fiber Production Equipment

PM and VOC are emitted from GFFP's thermobonding ovens and from polyester staple manufacturing processes.

Two groups of stack testing have been performed at GFFP: 1998/1999 and 2002. The 1998/1999 stack tests identified emissions from twelve products manufactured at GFFP without consideration for pollution control equipment. The 2002 stack tests represented a composite exhaust stream, not a product by product evaluation. Also, the May 2002 stack test did not evaluate the emissions at the inlet of the existing fiberbed scrubber and therefore the emissions without consideration of control equipment was unknown. As such, raw data from the 1998/1999 stack tests was used in determining the appropriate emission limits.

Testing performed in August 2002 and September 2002 indicated the following fiberbed scrubber control efficiencies for filterable PM and condensable PM:

	Filterable PM efficiency	Condensable PM efficiency
August 2002	95%	65%
September 2002	62%	57%

For the purposes of this license, fiberbed scrubber efficiency for filterable PM and condensable PM will conservatively be 60% and 50%, respectively.

The emission limits for the fiberbed scrubber were determined using the following formulas:

$$\frac{\begin{aligned} &(\text{Fiberbed Filterable PM} \\ &+ \text{Combustion Filterable PM} \\ &+ \text{Draw Oven Filterable PM}) \\ &\times (1 - 0.6) \end{aligned}}{\text{Filterable PM}}$$

$$\frac{\begin{aligned} &(\text{Fiberbed Condensable Extractable PM} \\ &+ \text{Fiberbed Condensable Inextractable PM} \\ &+ \text{Combustion Condensable Extractable} \\ &+ \text{Draw Oven Condensable Extractable PM} \\ &+ \text{Draw Oven Condensable Inextractable PM}) \\ &\times (1 - 0.5) \end{aligned}}{\text{Condensable PM.}}$$

Compliance with the PM/PM₁₀ emission limits will be determined by stack testing performed in accordance with EPA Methods 5 and 202.

The VOC emission limits were derived by taking the product with the highest Vapor-Phase total hydrocarbon emissions and adding the VOC emissions from combustion and the Draw Oven. Compliance with the VOC emission limit will

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be determined by stack testing performed in accordance with EPA Method 25A modified by using chilled impingers like those used in Method 202 or other method approved by the Department to remove condensable PM. Methane shall be quantified using EPA Method 18 or other method approved by the Department. The quantified methane shall be subtracted from the Method 25A result. The condensable PM is removed because that mass is not a VOC and the quantified methane is subtracted because methane is not a VOC.

Visible emissions from crystallizers, spinnerettes, draw line, spin finish and baling operations shall not exceed 5% opacity on a six-minute block average basis, except for no more than 1 six-minute block average in any one-hour period.

C. Annual Emission

GFFP shall be restricted to the following annual emissions, based on a 12-month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	14.8
PM ₁₀	14.8
SO ₂	0.2
NO _x	27.6
CO	23.2
VOC	33.7

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, GFFP is below the levels required for modeling.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-678-71-E-A, subject to the conditions found in Air Emission License A-678-71-A-N, amendment A-678-71-B-M, amendment A-678-71-C-A and in the following conditions:

The following condition shall replace Condition 17(B) of Air Emission License A-678-71-A-N:

(17)B. The fiberbed system shall be limited to the following emission rates:

<u>Pollutant</u>	<u>lb/hr</u>
PM	5.77
PM ₁₀	5.77
SO ₂	0.07
NO _x	2.62
CO	2.16
VOC	8.16

Compliance is based on stack testing. Initial stack testing for PM and VOC from the fiberbed scrubber shall be performed by June 30, 2003. Additional testing shall be performed when requested by the Department.

PM testing shall be performed in accordance with EPA Methods 5 and 202.

VOC testing shall be performed in accordance with EPA Method 25A modified by using chilled impingers like those used in Method 202 or other method approved by the Department to remove condensable PM. Methane shall be quantified using EPA Method 18 or other method approved by the Department.

The quantified methane shall be subtracted from the Method 25A result.

The following condition shall replace Condition 30 of Air Emission License A-678-71-A-N:

- (30) GFFP is limited to an operational limit of 50 million pounds of thermobonder output per year, based on a 12-month rolling total, demonstrated by production records. GFFP shall keep a log recording monthly fiber production in addition to the 12-month rolling total.

The following are new conditions:

(34) **Annual Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall annually report by September 1, to the Department, the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;

or

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- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

- (35) GFFP shall pay the annual air emission license fee within 30 days of **August 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.
- (36) This amendment shall expire concurrently with Air Emission License A-678-71-A-N.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: November 5, 2002

Date of application acceptance: November 6, 2002

Date filed with the Board of Environmental Protection: _____

This Order prepared by Mark Roberts, Bureau of Air Quality.